

QMplus Incident Report

Date: 8th October 2015

Summary

On Thursday, 1st October 2015, a number of users were unable to log into QMplus, and several tickets were raised with the Helpdesk. Some users reported receiving the following message:

'You seem to be Shibboleth authenticated but Moodle has no valid account for your username. Your account may not exist or it may have been suspended.'

Incident Overview

On Thursday 1st October 2015, at around 3pm, some members of staff and students were unable to access QMplus and raised several tickets to the Helpdesk. The initial diagnosis was complicated by the fact that there were different factors causing access problems and a root cause was difficult to identify at that time due to the variables and inconsistencies of the reported issues.

By Friday, 2nd October, students who did not have access to QMplus had their access restored - the reason for their login issues was identified as Data Quality glitches between the SITS student records database and QMplus, these were classed as normal start of term delays. These student records did not previously exist in QMplus and were subsequently created.

Focus turned to the number of staff that were also unable to log into QMplus, and whose accounts were deleted from QMplus. Initially this problem appeared to be within the School of English and Drama (SED) only.

The IT Services team worked over the weekend to identify the root cause of the access issues, as well as to determine a plan to restore the affected accounts and any data. A list of 24 affected staff accounts was supplied by SED.

On Monday, 5th October, IT Services ran a script to restore the SED accounts into QMplus, along with their course, group and cohort associations. The E-Learning Unit checked the results and manually updated any missing information. This task was completed by the end of Monday, 5th October, and School of English and Drama representatives were contacted on the morning of Tuesday, 6th October.

Cause of Incident

Focus then turned to further investigation around the cause of the incident, to identify if other accounts had been affected, and to review current processes to mitigate such incidents in the future.

On Tuesday, 6th October 2015 it was confirmed that the cause of the incident was a scheduled QMplus housekeeping task (change 5450), intended to remove a number of inactive and unused accounts in QMplus. Unfortunately, as part of the removal process, a number of active accounts were inadvertently deleted. Upon investigation, it emerged that these accounts belonged to contractors or users external to QMUL's HR database such as teaching assistants, temporary staff, and a few new staff members.

Technical Workflow and Details of Incident

This incident has resulted in an in-depth review of the current workflow and highlighted the complexity of QMplus user account creation. QMplus is populated with user accounts from SITS (student record database) and ResourceLink (HR staff database). A combined data feed from both databases is sent to QMplus three times a day and accounts are created or updated in QMplus to reflect the information held in the feed.

Our understanding is that external staff details, as well as that of contractors and temporary workers, are not stored in ResourceLink and therefore are not automatically included in the data feed. When a request is made for a new computer services account, the Helpdesk create this account. When they receive a new username, email address and password, they then manually create an account in QMplus and set it for Shibboleth authentication. The Helpdesk will then create a mapping for the computer services account to the ResourceLink record via a system called HRCS (HR Computer Service). This system then populates the ResourceLink record with the email address and username. The data feed sent from ResourceLink to QMplus will exclude HR records that do not have an email address and username. QMplus will not accept a new or updated record without these fields populated.

If Helpdesk do not create a mapping for the computer services account in HRCS, the QMplus account will continue to reside in QMplus, but will not become a part of the daily data feed process.

Effect of change 5450

Last Thursday, 1st October 2015, a change was applied to QMplus (change 5450) to remove inactive accounts in QMplus. The process involved running a query to compare the difference in the latest combined ResourceLink/SITS data feed with the existing accounts inside QMplus. The difference then formed the list that was used for the deletion of user accounts.

- Any staff member without a ResourceLink record who had an account in QMplus was considered an inactive user and would have had their QMplus account deleted.
- QM agency, contract staff, Teaching Assistants and other temporary or external staff who are not entered in the HRCS system did not have a ResourceLink record.

The logic for the change was based on a misunderstanding of the user account dataflow through to QMplus. Accounts not linked in HRCS would not have made it through to the ResourceLink data feed and these accounts would have been deleted by change 5450 in error. This was the root cause of the incident.

Conclusion

Once the root cause of the incident was identified, the IT Services team ran further scripts to identify those accounts that are not in the ResourceLink feed but are in QMplus, and a further restoration process began to re-enrol those users.

By the end of Thursday, 8th October 2015 over 900 QMplus accounts were restored to QMplus, along with any course associations – this included many accounts that were genuinely inactive (not logged into QMplus in over a year) but also around 500 were active accounts (logged in within the last year), with the majority of these being external, contract or temporary staff who were not included in the HR ResourceLink feed to QMplus.

The IT Services and E-Learning teams will continue to monitor this to ensure that all active user accounts have been restored. The team will look through the restored user accounts to validate the data that has been restored. Unfortunately there is no guarantee that all user activity has been restored, and we ask that any affected staff members who have lost activity data to contact us and we will do our best to assist. Most affected users have not logged into QMplus since the upgrade in July. In this case, where data is available on the archive (snapshot taken on 22 July 2015), users will be able to access data activity from the archive available at: <http://2014.qmplus.qmul.ac.uk/>. Any data or activity entered in QMplus after the archive snapshot date may be lost. The E-Learning Unit and IT Services team will endeavour to locate any information that may be available on other back up servers. If you are still affected by missing data, please contact us by raising a Helpdesk ticket at <https://helpdesk.qmul.ac.uk> or by calling 8888.

We sincerely apologise for this error and for the inconvenience this has caused. We will conduct further reviews of our account creation and deletion processes in order to make improvements and mitigate such incidents in the future. We will work with the various stakeholders to see how the systems, account data and workflow can be improved.

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